What is claimed is:

1. A system for tracking the location of an autonomous capsule through the gastro-intestinal tract of a patient comprising:

an acoustic transducer transmitter and an acoustic transducer receiver,

wherein the acoustic transmitter is arranged to transmit a tracking signal from the acoustic transmitter to the acoustic receiver, between the autonomous capsule and a location external to a patient's body, and

wherein in use, the acoustic transmitter is located at one of the autonomous capsule and the location external the patient's body and the acoustic receiver is located at the other of the autonomous capsule and the location external the patient's body.

2. The system of claim 1 wherein the acoustic transmitter is located at the capsule and in use, the receiver is located at the location external to the patient's body.

3. The system of claim 1 wherein the acoustic receiver is located at the capsule and in use, the acoustic transmitter is located at the location external to the patient's body.

4. The system of claim 1 wherein the acoustic receiver comprises a transducer configured to convert an acoustic signal sent by the acoustic transmitter, into a representative electrical signal.

5. The system of claim 4 further comprising a processor wherein the acoustic receiver is configured to communicate with the processor, and wherein the processor is configured to receive the representative electrical signal.

6. The system of claim 5 wherein the processor is configured to determine the transmission time of the tracking signal from the acoustic transmitter to the acoustic receiver from the representative electrical signal.

7. The system of claim 6 wherein the processor is configured to determine a capsule location in three-dimensional space.

8. The system of claim 6 wherein the processor is configured to determine a capsule location along a length of a portion of an intestinal tract.

9. The system of claim 5

wherein the processor is configured to determine a location of the capsule on a coordinate system, at least in part based on the representative electrical signal.

10. The system of claim 9 wherein the system further comprises a reference signal generator arranged to generate a reference signal at a predetermined time interval from transmission of the acoustic signal and a reference signal receiver,

wherein the reference signal receiver is arranged to receive the reference signal and communicate the reference signal to the processor,

wherein the processor is configured to use the reference signal to determine transmission time of the acoustic signal between the capsule and the location external to the patient's body, and to determine the location of the capsule on the coordinate system.

11. The system of claim 10 wherein the reference signal is an RF telemetry signal.

12. The system of claim 10 wherein the reference signal generator is located at the capsule.

13. The system of claim 9 wherein the processor comprises a tracking system arranged to determine a location of the capsule along a length of a portion of the intestinal tract.

14. The system of claim 13 wherein the tracking system is arranged to determine the location along the length of the intestinal tract, from a determination of a plurality of locations of the capsule as the capsule passes through the portion of the intestinal tract.

15. The system of claim 1 wherein the capsule further comprises a sensor for sensing a characteristic of the intestinal tract adjacent a location of the capsule within a portion of the intestinal tract.

16. The system of claim 15 wherein the sensor comprises an electrode and wherein the characteristic comprises an electrical parameter of the intestinal tract.

17. The system of claim 16 wherein the electrical parameter comprises electrical impedance of an intestinal wall.

18. The system of claim 16 wherein the electrical parameter comprises an electrical potential over at least a portion of an intestinal wall.

19. The capsule of claim 18 wherein the electrical potential comprises a pacesetter potential.

20. The capsule of claim 18 wherein the electrical potential comprises inherent spike bursts.

21. The capsule of claim 18 wherein the electrical potential comprises an induced pacesetter potential.

22. The capsule of claim 18 wherein the electrical potential comprises an induced spike burst.

23. The system of claim 15 wherein the sensor comprises a pressure sensor.

24. The system of claim 15 wherein the sensor comprises an optical sensor.

25. The system of claim 15 wherein the sensor comprises a pH sensor.

26. The system of claim 15 wherein the sensor comprises a strain gauge.

27. The system of claim 26 wherein the strain gauge is arranged to measure contractile force.

28. The system of claim 15 wherein the sensor comprises a temperature sensing device.

29. The system of claim 15 wherein the sensor comprises a chemical sensor arranged to sense the presence of a chemical.

30. The system of claim 1 further comprising a sampling device for obtaining a sample from the intestinal tract.

31. The system of claim 1 wherein the capsule comprises a treatment device for providing treatment to the intestinal tract.

32. The system of claim 31 wherein the treatment device comprises a therapeutic agent delivery device.

33. The system of claim 31 wherein the treatment device comprises an electrically stimulating electrode.

34. The system of claim 31 wherein the treatment device comprises a marker for identifying a location.

35. The system of claim 15 wherein the capsule further comprises a telemetry device arranged to transmit a telemetry signal corresponding to the characteristic sensed by the sensor.

36. The system of claim 35 further comprising a telemetry receiver for receiving the telemetry signal.

37. The system of claim 36 further comprising a processor wherein the telemetry receiver is coupled to the processor and wherein the processor is arranged to identify the location of the sensed characteristic within the portion of the intestinal tract.

38. The system of claim 37 wherein the processor is arranged to identify the location of the sensed characteristic along a length of the portion of the intestinal tract.

39. The system of claim 38 further comprising a second capsule wherein the second capsule comprises: a treatment device arranged to provide treatment to the intestinal tract.

40. The system of claim 39 wherein the system further comprises a second acoustic transmitter arranged to transmit a tracking signal from the second acoustic transmitter to the acoustic receiver, between the second capsule and the location external to the patient's body, and

wherein the second acoustic transmitter is located at the second capsule, and wherein the acoustic receiver is located at the location external the patient's body.

41. The system of claim 40

wherein the acoustic receiver is configured to convert the acoustic signal transmitted by the second acoustic transducer to a second representative electrical signal and configured to communicate the second representative electrical signal to the processor; and

wherein the processor is configured to determine a location of the second capsule along the length of the portion of the intestinal tract.

42. The system of claim 41 wherein the processor is configured to determine when the second capsule is at the location of the sensed characteristic based at least in part on the second representative signal.

43. The system of claim 41

wherein the second capsule comprises a second telemetry device operatively coupled to the treatment device, and

wherein the processor is configured to control an external telemetry transmitter to transmit a control signal to the second capsule, the control signal being received by the second telemetry device, wherein the control signal causes the treatment device to provide treatment to the intestinal tract at a selected location along the length of the portion of the intestinal tract.

44. The system of claim 43 wherein the selected location is the location of the sensed characteristic.

45. The system of claim 39 wherein the system further comprises a second acoustic receiver arranged to receive a second acoustic signal transmitted from the acoustic transmitter, between the second capsule and the location external to the patient's body, and

wherein the second acoustic receiver is located at the second capsule, and wherein the acoustic transmitter is located at the location external the patient's body.

46. The system of claim 49 wherein the second acoustic receiver comprises a transducer configured to convert the second acoustic signal to a second representative elelctrical signal and configured to communicate with the processor, wherein the processor is configured to determine the location of the second capsule along the length of the portion of the intestinal tract.

47. The system of claim 46 wherein the processor is configured to determine when the second capsule is at the location of the sensed characteristic based at least in part on the second representative signal.

48. The system of claim 46

wherein the second capsule comprises a second telemetry device operatively coupled to the treatment device, and

wherein the processor is configured to control an external telemetry transmitter to transmit a control signal to the second capsule, the control signal being received by the second telemetry device, wherein the control signal causes the treatment device to provide treatment to the intestinal tract at a selected location along the length of the portion of the intestinal tract.

49. The system of claim 48 wherein the selected location is the location of the sensed characteristic.

50. A system for treating or diagnosing the intestinal tract comprising:

an autonomous capsule comprising an acoustic transducer, the transducer being arranged to emit an acoustic signal detectable externally of a patient's body as the capsule passes through at least a portion of the intestinal tract; and

at least one external acoustic receiver configured to sense the acoustic signal transmitted by the capsule.

51. The system of claim 50 wherein the system comprises a plurality of external acoustic receivers configured to sense the acoustic signal transmitted by the capsule.

52. The system of claim 50 further comprising a reference generator arranged to generate a time reference from which the time of the acoustic signal generation is determined.

53 The system of claim 52 wherein the reference signal is a trigger signal arranged to trigger generation of the acoustic signal.

54. The system of claim 50 wherein the capsule comprises a plurality of acoustic transducers, each of the plurality of transducer being arranged to emit an acoustic signal detectable by the at least one acoustic receiver as the capsule passes through at least a portion of the intestinal tract, to provide information from which the orientation of the capsule may be derived.

55. The system of claim 50 wherein the at least one external acoustic receiver comprises a transducer for converting the acoustic signal to a representative electrical signal and an output for communicating the electrical signal.

56. The system of claim 55 further comprising:

a processor configured to communicate with the output of the at least one acoustic receiver, wherein the processor is arranged to determine location of the capsule on a coordinate system based at least in part on the electrical signal of the at least one acoustic receiver.

57. The system of claim 56 wherein the capsule further comprises a reference signal generator arranged to generate a reference signal at a predetermined time interval from transmission of the acoustic signal and at least one external reference signal receiver,

wherein the at least one external reference receiver is arranged to receive the reference signal and communicate the reference signal to the processor,

wherein the processor is arranged to use the reference signal to determine transmission time of the acoustic signal from the capsule to the at least one acoustic receiver and to determine the location of the capsule on the coordinate system.

58. The system of claim 57 wherein the reference signal generator is an RF telemetry device.

59. The system of claim 56 wherein the processor comprises a tracking system arranged to determine a location of the capsule along a length of the portion of the intestinal tract.

60. The system of claim 59 wherein the location along the length is based on the determination of a plurality of locations of the capsule as the capsule passes through the portion of the intestinal tract.

61. The system of claim 50 wherein the capsule further comprises a sensor for sensing a characteristic of the intestinal tract adjacent the location of the capsule within the portion of the intestinal tract.

62. The system of claim 61 wherein the sensor comprises an electrode and wherein the characteristic comprises an electrical parameter of the intestinal tract.

63. The system of claim 62 wherein the electrical parameter comprises electrical impedance of an intestinal wall.

64. The system of claim 62 wherein the electrical parameter comprises an electrical potential over at least a portion of an intestinal wall.

65. The system of claim 64 wherein the electrical potential comprises a pacesetter potential.

66. The system of claim 64 wherein the electrical potential comprises inherent spike bursts.

67. The system of claim 64 wherein the electrical potential comprises an induced pacesetter potential.

68. The system of claim 64 wherein the electrical potential comprises an induced spike burst.

69. The system of claim 61 wherein the sensor comprises a pressure sensor.

70. The system of claim 61 wherein the sensor comprises an optical sensor.

71. The system of claim 61 wherein the sensor comprises a pH sensor.

72. The system of claim 61 wherein the sensor comprises a strain gauge.

73. The system of claim 72 wherein the strain gauge is arranged to measure contractile force.

74. The system of claim 61 wherein the sensor comprises a temperature sensing device.

75. The system of claim 61 wherein the sensor comprises a chemical sensor arranged to sense the presence of a chemical.

76. The system of claim 50 further comprising a sampling device for obtaining a sample from the intestinal tract.

77. The system of claim 61 wherein the capsule further comprises a telemetry circuit for transmitting a telemetry signal corresponding to the characteristic sensed by the sensor.

78. The system of claim 77 further comprising a telemetry receiver for receiving the telemetry signal.

79. The system of claim 78 wherein the telemetry receiver is coupled to the processor and wherein the processor is arranged to identify the location of the sensed characteristic within the portion of the intestinal tract.

80. The system of claim 79 wherein the processor is arranged to identify the location of the sensed characteristic along a length of the portion of the intestinal tract.

81. The system of claim 50 wherein the capsule comprises a treatment device arranged to provide treatment to the intestinal tract.

82. The system of claim 81 wherein the treatment device comprises a therapeutic agent delivery device.

83. The system of claim 81 wherein the treatment device comprises an electrically stimulating electrode.

84. The system of claim 81 wherein the treatment device comprises a marker for identifying a location.

85. The system of claim 59 further comprising a second capsule wherein the second capsule comprises: a treatment device for providing treatment to the intestinal tract.

86. The system of claim 85 wherein the second capsule further comprises:

a second acoustic transducer, the second acoustic transducer being arranged to emit a second acoustic signal detectable externally of a patient's body as the second capsule passes through at least a portion of the intestinal tract.

87. The system of claim 86

wherein the at least one external acoustic receiver is configured to sense the second acoustic signal transmitted by the second capsule,

wherein the at least one external acoustic receiver comprises a transducer configured to convert the second acoustic signal transmitted by the second capsule to a second representative electrical signal, and a second output configured to communicate the second representative electrical signal to the processor; and

wherein the processor is arranged to determine a location of the second capsule along the length of the portion of the intestinal tract.

88. The system of claim 87 wherein the second capsule comprises a telemetry device operatively coupled to the treatment device, and

wherein the processor is configured to control an external telemetry transmitter to transmit a control signal to the second capsule, the control signal being received by the telemetry device, wherein the control signal causes the treatment device to provide treatment to the intestinal tract at a selected location along the length of the portion of the intestinal tract.

89. An autonomous capsule for treatment or diagnosis of an intestinal tract of a patient comprising:

a capsule body sized to pass through the intestinal tract of a patient, the capsule body including an acoustic transducer, the acoustic transducer being arranged to emit an acoustic signal detectable externally of a patient's body as the capsule passes through at least a portion of the intestinal tract; and

a reference signal generator arranged to generate a signal from which the time of the acoustic signal generation is determined.

90. The capsule of claim 89 wherein the capsule further comprises a sensor arranged to sense a characteristic of the intestinal tract adjacent the location of the capsule within the portion of the intestinal tract.

91. The capsule of claim 89 further comprising a sampling device for obtaining a sample from the intestinal tract.

92. The capsule of claim 89 wherein the capsule further comprises a treatment device for providing treatment to the intestinal tract.

93. The capsule of claim 89 wherein the capsule comprises a plurality of acoustic transducers, each of the plurality of transducers being arranged to emit a signal detectable externally of a patient's body, to provide information from which orientation of the capsule is determined.

94. An autonomous capsule for treatment or diagnosis of an intestinal tract including a capsule body comprising a plurality of acoustic transducers and an energy source coupled to each of the transducers, each of the plurality of transducers being arranged to emit an acoustic signal detectable externally of a patient's body as the capsule passes through at least a portion of the intestinal tract to provide information from which the orientation of the capsule is derived.

95. A system for treating or diagnosing the intestinal tract comprising:

an autonomous capsule comprising an acoustic transducer, the transducer being arranged to emit an acoustic signal detectable externally of a patient's body as the capsule passes through at least a portion of the intestinal tract; and

a reference signal generator arranged to generate a signal from which the time of the acoustic signal generation is determined.

96. An intestinal tract diagnostic system comprising:

a capsule including: a sensor arranged to sense a condition of a portion of an intestinal tract at a plurality of locations along a length; and a position identifier configured to transmit information identifying the location of the capsule as it passes through the portion of the intestinal tract.

An external receiver, external to the capsule configured to receive the information identifying the location of the capsule; and

a processor coupled to the external receiver to receive the information identifying the location of the capsule, the processor configured to determine a position of the capsule along a length of the portion of the intestinal tract at each of the plurality of locations.

97. The intestinal tract diagnostic system of claim 96 wherein the processor is configured to correlate the location of the capsule along the length of the portion of the intestinal tract with the condition sensed by the sensor at the location along the length of the portion of the intestinal tract.

98. The intestinal tract diagnostic system of claim 97 further comprising:

a display coupled to the processor, the display being configured to display a diagnostic map of sensed conditions of the intestinal tract along the length of the portion of the intestinal tract.

99. The intestinal tract diagnostic system of claim 96 wherein the capsule further comprises a telemetry circuit configured to transmit a telemetry signal containing information corresponding to a sensed condition.

100. The intestinal tract diagnostic system of claim 99 further comprising a telemetry receiver wherein the telemetry receiver is arranged to receive the telemetry signal and to communicate the information corresponding to the sensed condition to the processor.

101. An intestinal tract treatment system comprising:

a first capsule including: a sensor arranged to sense a condition of a portion of an intestinal tract at a location of the first capsule along a length of a portion of the intestinal tract as the first capsule passes through a portion of the intestinal tract; a first position identifier configured to transmit information identifying the location of the first capsule and a sensed condition transmitter configured to transmit information concerning the sensed condition; and;

a receiver external to the first capsule, configured to receive the information identifying the location of the first capsule and information concerning the sensed condition;

a processor configured to communicate with the receiver to receive the information identifying location of the first capsule and information concerning the sensed condition, wherein the processor is configured to determine a location of the sensed condition along a length of the portion of the intestinal tract at the location; and

a second capsule including: a treatment device arranged to provide a therapeutic function within the portion of the intestinal tract; and a second position identifier configured to transmit information identifying a location of the second capsule along the length of the the portion of the intestinal tract as it passes through the portion of the intestinal tract, wherein the processor is configured to determine a location of the second capsule corresponding to the location of the sensed condition along the length of the intestinal tract.

102. The intestinal tract treatment system of claim 101 wherein said receiver comprises a plurality of receivers.

103. The intestinal tract treatment system of claim 102 wherein said plurality of receivers comprises a position identification receiver configured to receive the informaiton identifying the location of the first capsule and a sensed condition receiver configured to receive information concerning the sensed condition.

104. The intestinal tract treatment system of claim 101 wherein the second capsule includes a treatment actuating device operative to cause the treatment device to provide a therapeutic function.

105. The intestinal tract treatment system of claim 104 wherein the second capsule further comprises a telemetry circuit configured to receive a command signal from an external transmitter to control the treatment actuating device.

106. The intestinal tract treatment system of claim 105 wherein the processor is operatively coupled to the external transmitter to cause the external transmitter to provide the command signal when the second capsule has reached a location along the length of the tract to be treated.

107. The intestinal tract treatment system of claim 106 wherein the location along the length of the tract to be treated is the location of the sensed condition.

108. A method for treating an intestinal tract of a patient comprising the steps of:

providing a first capsule comprising :

a first acoustic transducer;

providing a second acoustic transducer acoustically coupled to the patient at a location external to the patient's body;

introducing the first capsule into the intestinal tract wherein the capsule moves through the intestinal tract;

causing an acoustic signal to be emitted between the first and second acoustic transducers as the first capsule passes through at least a portion of the intestinal tract;

determining a time lag between emitting the acoustic signal from the one the first and second transducers and receiving the signal at the other of the first and second transducers; and

determining a first location of the capsule at least in part from the time lag.

109. The method of claim 108 wherein the step of providing a second transducer comprises:

providing a plurality of external transducers coupled to the patient at a plurality of corresponding locations external to the patient's body.

110. The method of claim 109 further comprising the steps of:

causing at least one acoustic signal to be emitted between the first acoustic transducer and the plurality of external transducers; and

determining a plurality of corresponding time lags between emitting the at least one acoustic signal between the first transducer and the plurality of external transducers, to determine a capsule location within space as the capsule moves through a portion of the intestinal tract.

111. The method of claim 110 further comprising the steps of:

providing the capsule with a sensor, and sensing a condition of the intestinal tract with the sensor.

112. The method of claim 111 further comprising the step of correlating the condition with the capsule location within space.

113. The method of claim 111 wherein the step of sensing a condition of the intestinal tract comprises sensing pressure.

114. The method of claim 111 wherein the step of sensing a condition of the intestinal tract comprises sensing inherent electrical signals of a smooth muscle associated with the intestinal tract.

115. The method of claim 111 wherein the step of sensing comprises sensing at a plurality of locations.

116. The method of claim 115 further comprising the step of creating a map of sensed conditions with respect to the locations.

117. The method of claim 111 further comprising the steps of:

providing signals representative of each of the time lags to a processor;

providing a telemetry circuit for communicating a signal representative of the sensed condition to a telemetry receiver external of the patient, wherein the telemetry receiver is coupled to the processor that identifies the location along the length of the portion of the intestinal tract where the condition is sensed,

providing a signal representative of the sensed condition to the telemetry receiver.

118. The method of claim 108 further comprising the step of:

determining a plurality of locations of the capsule as the capsule moves through a portion of the intestinal tract to determine the capsule's position along a length of the intestinal tract.

119. The method of claim 118 further comprising the step of:

providing the capsule with a sensor, and sensing a condition of the intestinal tract with the sensor.

120. The method of claim 119 further comprising the step of correlating the condition with a location along the length of the tract.

121. The method of claim 120 further comprising the step of determining a location for treatment.

122. The method of claim 119 wherein the step of sensing comprises sensing at a plurality of locations.

123. The method of claim 121 further comprising the step of:

providing a second capsule comprising a third acoustic transducer and a treatment device coupled to a telemetry circuit;

introducing the second capsule into the intestinal tract wherein the second capsule moves through the intestinal tract;

causing a second acoustic signal to be emitted between the first and third acoustic transducers as the capsule passes through at least a portion of the intestinal tract;

identifying when the second capsule has reached the location for treatment; and

sending a control signal to the telemetry circuit of the second capsule to actuate the treatment device to treat the intestinal tract at the location for treatment along the length of the portion of the intestinal tract where the condition is sensed.

124. The method of claim 108 further comprising the steps of:

identifying a location for treatment along the length of the portion of the intestinal tract;

providing a second capsule comprising a third acoustic transducer and a treatment device coupled to a telemetry circuit;

introducing a second capsule into the intestinal tract wherein the second capsule moves through the intestinal tract;

causing a second acoustic signal to be emitted between the first and third acoustic transducers as the capsule passes through at least a portion of the intestinal tract;

determining a time lag between emitting the acoustic signal from one the first and third acoustic transducers and receiving the signal at the other of the first and third acoustic transducers; and

determining a location of the second capsule at least in part from the time lag;

identifying when the second capsule has reached the location for treatment; and

treating the intestinal tract at the location for treatment.

125. The method of claim 124

wherein the telemetry circuit is arranged to receive a signal from a telemetry transmitter external of the patient, and

wherein the step of treating the intestinal tract comprises the step of providing a control signal from the telemetry transmitter to the telemetry circuit to instruct the second capsule to provide treatment at the location.

126. The method of claim 108:

wherein the first transducer of the first capsule comprises an acoustic transmitter and wherein the second transducer located external to the patient's body

comprises an acoustic receiver, and wherein the acoustic signal is transmitted from the first transducer to the second transducer.

127. The method of claim 126 wherein the step of determining a time lag comprises:

providing the first capsule with an electromagnetic signal transmitter, transmitting an electromagnetic signal from the electromagnetic signal transmitter at a predetermined time interval with respect to emitting the acoustic signal,

receiving the electromagnetic signal at an electromagnetic signal receiver external to the patient; and

determining the time lag based on the time between receiving the electromagnetic signal and receiving the the acoustic signal.

128. A method of treating a portion of an intestinal tract comprising the steps of:

passing a capsule through the portion of the intestinal tract

determining the capsule's location along the length of the portion of the intestinal tract,

identifying a location along the length to be treated,

passing a second capsule through the intestinal tract,

identifying when the second capsule has reached the location along the length to be treated; and

providing treatment with the second capsule to the location along the length of the intestinal tract.

129. The method of claim 128 wherein the second capsule comprises a stimulating electrode and

wherein the step of providing treatment to the tract comprises:

delivering an electrically stimulating signal to the tract with the stimulating electrode.

130. The method of claim 129 wherein the step of delivering an electrically stimulating signal to the intestinal tract comprises electrically stimulating the small intestine.

131. The method of claim 129 wherein the step of delivering an electrically stimulating signal to the intestinal tract comprises electrically stimulating the small intestine to induce smooth muscle contractions.

132. The method of claim 129 wherein the step of delivering an electrically stimulating signal to the intestinal tract comprises electrically stimulating the small intestine to inhibit smooth muscle contractions.

133. The method of claim 129 wherein the step of delivering an electrically stimulating signal to the intestinal tract comprises supplying a plurality of electrical pulses to the wall of the intestinal tract.

134. The method of claim 133 wherein the pulses comprise burst pulses.

135. The method of claim 129 wherein the step of delivering an electrically stimulating signal to the intestinal tract comprises pacing the intestinal tract.

136. The method of claim 135 wherein the step of pacing the intestinal tract comprises pacing the small intestine.

137. The method of claim 129 wherein the step of delivering an electrically stimulating signal to the intestinal tract comprises entraining the slow wave signal of the small intestine.

138. A method for diagnosing and/or treating an intestinal tract comprising:

providing a capsule comprising :

a capsule body including an electronic circuit; and

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at least one electrode coupled to the capsule body, the at least one electrode being in communication with the electronic circuit;

introducing the capsule into the intestinal tract wherein the capsule moves through the intestinal tract so that the at least one electrode is in contact with tissue in the intestinal tract;

receiving an inherent electrical signal from the tissue in the electronic circuit through the electrode;

identifying a location along a length of the intestinal tract corresponding to the inherent electrical signal.

139. The method of claim 138 further comprising :

providing a second capsule comprising:

a second capsule body including a second electronic circuit; and

at least one second electrode coupled to the second capsule body, the at least one second electrode being in communication with the second electronic circuit,

introducing the second capsule into the intestinal tract wherein the second capsule moves through the intestinal tract so that the second electrode is in contact with tissue in the intestinal tract;

delivering a second electrically stimulating signal from the at least one second electrode to the location along the length of the intestinal tract.

140. A system for treating or diagnosing the intestinal tract of a patient comprising:

first capsule means for passing through the intestinal tract of a patient;

means for tracking the first capsule means, the means for tracking located external to the patient's body;

an acoustic signal means for transmitting an acoustic signal between the first capsule means as it is passing through the intestinal tract of a patient, and the means for tracking;

a location determining means for determining the location of the first capsule means on a coordinate system.

141. The system of claim 140 wherein the location determining means comprises a time differential means for determining the transmission time of the acoustic signal between the external means and the capsule means.

142. The system of claim 141 wherein the location determining means comprises a reference means for determining the time of origin of the acoustic signal.

143. The system of claim 140 wherein the location determining means is configured to determine at least one location of the first capsule means along the length of a portion of an intestinal tract.

144. The system of claim 143 further comprising second capsule means for passing through the intestinal tract and means for tracking the second capsule means along the length of the portion of the intestinal tract at at least one tracked location, wherein the means for tracking the second capsule means includes means for correlating the at least one tracked location of the second capsule means with the at least one location of the first capsule means.

145. A system for treating or diagnosing the intestinal tract of a patient comprising:

a capsule means for emitting a detectable acoustic signal as it passes through at least a portion of the intestinal tract; and

receiver means for receiving the acoustic signal external to the patient, the receiver means comprising at least one acoustic sensor;

processor means for determining the location of the capsule means on a coordinate system based on the acoustic signal received at the receiver means.

146. The system of claim 145 further comprising reference means for determining the time lag between emitting the detectable acoustic signal and receiving the acoustic signal at the at least one acoustic sensor.

147. A system for treating or diagnosing the intestinal tract of a patient comprising:

capsule means for passing through a portion of an intestinal tract;

means for determining location of the capsule means along a length of a portion of the intestinal tract;

sensing means for sensing a characteristic of the intestinal tract;

tracking means for tracking the location of the capsule means with respect to the sensed characteristic at the location.

148. The system of claim 147 wherein the means for determining location of the capsule means comprises an acoustic means for determining location.

149. The system of claim 147 further comprising means for diagnosing a location for treatment along the length of the portion of the intestinal tract.

150. The system of claim 149 further comprising means for treating the location for treatment along the length of the portion of the intestinal tract.

151. The system of claim 150 wherein the means for treating comprises:

a second capsule means;

means for determining the location of the second capsule means along the length of a portion of the intestinal tract; and

means for actuating the means for treating when the second capsule is located at the location for treatment.

152. A capsule for treatment or diagnosis of an intestinal tract of a patient comprising:

a capsule means for emitting a detectable acoustic signal as it passes through at least a portion of the intestinal tract; and

reference means for determining the time of acoustic signal origination from the capsule means.

153. The capsule of claim 152 further comprising sensor means for sensing a characteristic of the intestinal tract.

154. The capsule of claim 152 further comprising a sampling means for obtaining a sample from the intestinal tract.

155. The capsule of claim 152 further comprising a treatment means for providing treatment to the intestinal tract.

156. A capsule for treatment or diagnosis of an intestinal tract comprising:

a capsule body;

an electronic circuit; and

at least one electrode coupled to the capsule body, the at least one electrode being in communication with the electronic circuit,

wherein the capsule body is arranged to pass through at least a portion of the intestinal tract, whereby the at least one electrode is positioned to be in electrical contact with at least a portion of the intestinal tract, wherein the at least one electrode is located on an elongate member coupled to the capsule body.

157. The capsule of claim 1356 wherein the elongate member comprises an elastically behaving material.

158. The capsule of claim 157 wherein the elastically behaving material has reversible deformation upon removal of a load from the material.

159. The capsule of claim 156 wherein the at least one electrode comprises a plurality of stimulating electrodes spaced longitudinally on the elongate member and at least one conductor coupling the plurality of electrodes to the electronic circuit.

160. The capsule of claim 156 wherein the elongate member is movable between stored and deployed positions, and further including a dissolvable encasing carried by the capsule body for retaining the flexible elongate member in the stored position.

161. The capsule of claim 156 wherein a plurality of electrodes are located on the elongate member.

162. The capsule of claim 161 wherein at least one electrode pair is selectable from the plurality of electrodes.

163. A capsule for treatment or diagnosis of an intestinal tract comprising:

a capsule body;

an electronic circuit; and

at least three electrodes coupled to the capsule body, the electrodes being in communication with the electronic circuit,

wherein the capsule body is arranged to pass through at least a portion of the intestinal tract, whereby at least one electrode pair is selectable from the at least three electrodes.

164. A capsule for treatment or diagnosis of an intestinal tract comprising:

a capsule body:

an electronic circuit; and

at least one electrode coupled to the capsule body, the electrode being in communication with the electronic circuit,

a sensor arranged to measure contractile forces exerted by a portion of the intestinal tract

wherein the capsule body is arranged to pass through at least a portion of the intestinal tract, whereby the electrode is positioned to be in electrical contact with at least a portion of the intestinal tract,

wherein the sensor comprises a pressure sensing device, and

wherein the pressure sensing device comprises an inflatable member having an inner chamber for receving an inflation medium and a pressure transducer in fluid communication with the inner chamber, the pressure transducer configured to convert the sensed pressure into a representative electrical signal.

165. The capsule of claim 164 wherein the inflatable member is located on an elongate member having a lumen therethrough, wherein the lumen is in fluid communication with the inner chamber and the pressure transducer.

166. The capsule of claim 164 further comprising an inflation device arranged to inflate the inflatable member with the inflation medium.

167. A capsule for diagnosing an intestinal tract comprising:

a first electrode pair and a second electrode pair spaced from the first electrode pair;

a stimulation circuit configured to provide a stimulating signal through the first electrode pair and a sensing circuit configured to sense an electrical signal through the second electrode pair.

168. A method for diagnosing an intestinal tract comprising the steps of:

providing a capsule having a first electrode pair and a second electrode pair spaced from the first electrode pair, and a stimulation circuit coupled to the first electrode pair and a sensing circuit coupled to the second electrode pair;

introducing the capsule into the intestinal tract of a patient;

delivering a stimulation signal to the first electrode pair; and

sensing with the second electrode pair, an electrical potential in the intestinal tract adjacent the second electrode pair and resulting from the stimulation signal delivered through the first electrode pair.

169. A capsule for treatment or diagnosis of an intestinal tract comprising:

a capsule body including an electronic circuit;

at least one electrode coupled to the capsule body, the at least one electrode being in communication with the electronic circuit, wherein the capsule body is arranged to pass through at least a portion of the intestinal tract, whereby the at least one electrode is positioned to be in electrical contact with at least a portion of the intestinal tract; and

a telemetry circuit operative to receive an instruction signal comprising a trigger signal from an external source, the telemetry circuit coupled to the at least one electrode so that when the capsule is deployed and a trigger signal is provided, an electrical stimulation pulse is delivered to a portion of the intestinal wall.

170. The capsule of claim 169 wherein the instruction signal further comprises a stimulation parameter instruction.

171. The capsule of claim 169 wherein the stimulation pulse comprises a burst of pulses.

172. The capsule of claim 169 wherein the stimulation pulse comprises a series of stimulation pulses.

173. The capsule of claim 169 wherein the stimulation pulse comprises a plurality of temporally spaced electrical pulses to the wall of the intestinal tract.

174. A method for treating an intestinal tract comprising the steps of:

providing a capsule comprising:

a capsule body including an electronic circuit;

at least one electrode coupled to the capsule body, the at least one electrode being in communication with the electronic circuit; and

a telemetry circuit coupled to the at least one electrode;

introducing the capsule into the intestinal tract wherein the capsule moves through the intestinal tract; and

transmitting an instruction signal comprising a trigger signal from an external source to the telemetry circuit to trigger a stimulation pulse provided to a portion of the intestinal wall.

175. The method of claim 174 wherein the step of transmitting an instruction signal to the telemetry circuit to trigger a stimulation pulse comprises transmitting a trigger signal to the telemetry circuit to trigger a burst of pulses.

176. The method of claim 174 wherein the step of transmitting an instruction signal comprises transmitting a trigger signal to electrically stimulate the small intestine.

177. The method of claim 176 wherein the small intestine is stimulated to cause smooth muscle contractions.

178. The method of claim 176 wherein the small intestine is stimulated to inhibit smooth muscle contractions.

179. The method of claim 174 wherein the step of transmitting an instruction signal from an external source to the telemetry circuit to trigger a stimulation pulse provided to a portion of the intestinal wall comprises supplying a plurality of temporally spaced electrical pulses to the wall of the intestinal tract.

180. The method of claim 174 further comprising the step of transmitting a plurality of instruction signals comprising a plurality of trigger signals from an external source to the telemetry circuit, wherein the trigger signals to trigger a plurality of stimulation pulses configured to pace a portion of intestinal tract.

181. The method of claim 180 wherein the trigger signals are configured to pace the small intestine.

182. The method of claim 174 further comprising the step of transmitting a plurality of instruction signals comprising a plurality of trigger signals from an external source to the telemetry circuit to trigger a plurality of stimulation pulses configured to entrain the slow wave signal of the small intestine.

183. The method of claim 179 wherein the stimulation pulse comprises burst pulses.

184. The method of claim 174 wherein one or more stimulation pulses cause peristaltic motion in the intestinal tract.